

KUNAL CHAWLA

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Applying for: Internship for Summer 2020

Phone: (+1) 4042634037 | (+91) 9818084540

Research Engineer interested in Machine Learning, Computer Vision and Natural Language Processing.

EDUCATION

Georgia Institute of Technology, Atlanta

Aug '19 - Current

Master of Science in Computer Science (Specialisation in Machine Learning)

Indian Institute of Technology, Delhi (IIT Delhi)

July '11 - May '15

Bachelor of Technology in Computer Science & Engineering

CGPA: 8.54/10.00

WORK EXPERIENCE

Engineer, Visual and Language Understanding Lab, AI Center

Mar '17 - Jul '19

Samsung Research, Samsung Electronics, South Korea

Project Leader: Dr. Wonsik Kim

- Introduced a method for image retrieval by ensembling features from multiple deep learners using attention masks, achieving **state-of-the-art** results on SOP, CARS and CUB datasets ([published in ECCV 2018](#))
- Designed and deployed image-based product search for Bixby Vision using **Caffe and Tensorflow**, optimised for low runtime and memory, currently running on 100 million+ smartphones (Galaxy S8+)
- Developed knowledge-based question answering chatbot for Samsung Customer Service using **BERT**
- Won first prize in [Perfect Product Image Recognition Challenge](#), presented at **ACMMM 2018**.

Associate, Tizen Platform Lab, Software R&D Center

Sep '15- Feb '17

Samsung Research, Samsung Electronics, South Korea

Project Leader: Dr. Mu-Woong Lee

- Designed a conditional rule engine and predictive battery statistics module for **Tizen** Operating System
- Created apps for abstractive **email summarization** and contact and calendar event extraction from Emails
- Built a **Swagger Codegen** module for Tizen to create client SDKs from OpenAPI specification

INTERNSHIPS

Research Paper Recommendation

Jun '15 - Aug '15

IBM Research Labs, Delhi

Supervisor: Dr. Mukesh Mohania

- Formulated an algorithm to recommend research papers to read based on learning aim and knowledge of a reader
- Built and used a **topic dependency graph** based on Wikipedia references and paper citations

Increasing Digitization Accuracy via Crowdsourcing

May '13 - Jul '13

Xerox Research Center India, Bangalore

Supervisor: Dr. Sailesh Vaya

- [Patented](#) a method to increase accuracy of digitisation of handwritten document using crowdsourcing
- Devised and used metrics for transcriptions similarity, workers' performance and language models-based likelihood

RESEARCH PROJECTS

Semi-supervised Text Style Transfer using Language Models

Aug '19 - Present

Convert social media sentences to formal using Transformers based seq2seq and language-models-based discriminator

Sentence Similarity using POS Tagging

July '14 - Nov '14

Calculated semantic sentence similarity using weighted average of word2vec-based similarity of various parts of speech, further using coreference resolution and tf-idf to improve accuracy from 62% to 68% on MSRP corpus

SCHOLASTIC ACHIEVEMENTS

- Achieved **All India Rank 6** in IIT-JEE 2011 and **All India Rank 20** in AIEEE among 500k+ students
- Secured Gold Medals in **Indian National Physics Olympiad** and **Chemistry Olympiad** 2011
- Certified among the Top 1% in India, in **Indian National Mathematics Olympiad (INMO)** 2011

TECHNICAL SKILLS

- **Tools:** PyTorch, TensorFlow, Caffe, MATLAB, R, CUDA, Make, Cmake
- **Languages:** C, C++, Java, Python, Scala, Perl, Ocaml, HTML, PHP, JavaScript, CSS